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10/004,275	11/15/2001	R. Shoshana Bamdad	M01015/70070 TJO/SRF	3831

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EXAMINER

FORMAN, BETTY J

ART UNIT PAPER NUMBER

1634

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/004,275	BAMDAD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	BJ Forman	1634	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-118 is/are pending in the application.
- 4a) Of the above claim(s) 1-68 and 102-118 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 69-101 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                             | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>03/02</u> . | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

1. Applicant's election with traverse of Group III, Claims 69-101, in papers filed 21 April 2003 is acknowledged. The traversal is on the grounds(s) that it would not be undue burden to examine the claims of all groups I-VII. However, it is maintained that undue burden would be required to examine the claims of groups I, II, IV, V, VI and VII along with claims of group III as evidenced by the fact that the claims of groups I, II, III, IV, V, VI and VII have acquired a separate status in the art as recognized by their different classifications as recognized by their divergent subject matter and because a search of the subject matter of invention III is not co-extensive with a search of inventions I, II, IV, V, VI and VII.

The requirement is still deemed proper and is therefore made FINAL.

***Information Disclosure Statement***

2. The references listed on the 1449 received 24 March 2002 have been reviewed. All references have also been considered except for the references which have a line drawn through them. The references not considered are those which are written in a language other than English.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 69-101 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 69-101 are indefinite in Claim 69 for the recitation “immobilizing the protein and the oligonucleotide relative to each other” because “relative” is a non-specific relational term. Therefore the relationship between the immobilized protein and oligonucleotide is undefined.

b. Claims 70-72, 79 and 86-87 are indefinite in Claim 70 for the recitation “the oligonucleotide identifier” because the recitation lacks proper antecedent basis in Claim 69. The claims are further indefinite for the recitation “immobilized relative to a common surface” because “relative” is a non-specific relational term. Therefore the relationship between the immobilized protein and oligonucleotide is undefined.

c. Claims 72, 77-87 are each indefinite for the recitation “the oligonucleotide identifier” because the recitation lacks proper antecedent basis in Claim 69.

d. Claims 72 is further indefinite for the recitation “immobilized relative to a common surface” because “relative” is a non-specific relational term. Therefore the relationship between the immobilized protein and oligonucleotide is undefined.

e. Claim 77 is further indefinite for the recitation “immobilized relative to a common polymer” because “relative” is a non-specific relational term. Therefore the relationship between the immobilized protein and oligonucleotide is undefined.

f. Claim 78 is further indefinite for the recitation “immobilized relative to a common dendrimer” because “relative” is a non-specific relational term. Therefore the relationship between the immobilized protein and oligonucleotide is undefined.

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g. Claim 79 is further indefinite for the recitation "immobilized relative to a common polymer" because "relative" is a non-specific relational term. Therefore the relationship between the immobilized protein and oligonucleotide is undefined.

h. Claims 81 and 83-85 are each indefinite being drawn to the "kit" of Claim 69. However, Claim 69 is drawn to a method. Therefore, Claims 81 and 83-85 lack proper antecedent basis in Claim 69. For purposes of examination, Claims 81 and 83-85 are interpreted as being drawn to the method of Claim 69.

i. Claims 88-97 are indefinite in Claim 88 for the recitation "the oligonucleotide identifier" because the recitation lacks proper antecedent basis in Claim 69.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 69, 70, 73-77, 79, 82-85, 88-91, 93-96 and 98 are rejected under 35

U.S.C. 102(e) as being anticipated by Kuimelis et al (U.S. Patent No. 6,537,749 filed 31 March 1999).

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Regarding Claim 69, Kuimelis et al disclose a method comprising expressing a protein with an oligonucleotide and immobilizing the protein and the oligonucleotide relative to each other i.e. the protein-oligonucleotide fusion is immobilized via hybridization of the oligonucleotide to an immobilized a capture probe (Column 3, lines 13-22 and Example 7, especially, Column 13, lines 7-64).

Regarding Claim 70, Kuimelis et al disclose the method wherein the oligonucleotide and protein are immobilized relative to a common surface i.e. solid support (Column 3, lines 13-39 and 58-63).

Regarding Claims 73-74, Kuimelis et al disclose the method wherein the surface is a recruitabel particle i.e. magnetic bead (Column 3, lines 58-63).

Regarding Claim 75, Kuimelis et al disclose the method wherein the surface is a colloid particle e.g. agarose or sepharose (Column 3, lines 58-63).

Regarding Claim 76, Kuimelis et al disclose the method wherein the surface is a surface of a chip (Column 3, lines 58-63).

Regarding Claim 77, Kuimelis et al disclose the method wherein the protein and oligonucleotide are immobilized relative to a common polymer e.g. capture probe (Column 1, lines 38-66).

Regarding Claim 79, Kuimelis et al disclose the method wherein the oligonucleotide is hybridized to an oligonucleotide sequence fastened to the surface i.e. capture probe (Column 1, lines 38-66; Column 3, lines 13-22; and Example 7, especially, Column 13, lines 7-64)

Regarding Claim 82, Kuimelis et al disclose the method wherein the oligonucleotide comprises linear DNA i.e. DNA and/or DNA linker (Column 3, lines 40-49 and Example 7, especially Column 13, lines 28-30).

Regarding Claim 83, Kuimelis et al disclose the method wherein the oligonucleotide comprises a protein expression template i.e. the RNA encodes the protein portion of the oligo-protein fusion (Column 1, lines 38-66 and Example 7, especially, Column 13, lines 7-64)

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Regarding Claim 84, Kuimelis et al disclose the method wherein the oligonucleotide comprises a product of a polymerase chain reaction (Example 7, especially Column 13, lines 11-27).

Regarding Claim 85, Kuimelis et al disclose the method wherein the oligonucleotide comprises a protein expression template i.e. the RNA encodes the protein portion of the oligo-protein fusion (Column 1, lines 38-66 and Example 7, especially, Column 13, lines 7-64)

Regarding Claim 88, Kuimelis et al disclose the method wherein the oligonucleotide and protein are adapted to be immobilized relative to each other in the absence of a common surface to which each is immobilized (Column 1, lines 38-66 and Example 7).

The claim is given the broadest reasonable interpretation in view of the claim language which broadly defines a method step of immobilization or adaptation of the oligonucleotide and protein. Broadly interpreted, the claim is limited to adapting the oligonucleotide and protein for immobilization in the absence of the surface e.g. prior to contacting the surface. The claim can also be interpreted as a negative limitation wherein the protein and oligonucleotide are not directly immobilized to a common surface. The disclosure of Kuimelis et al encompasses both these interpretations. Kuimelis et al teach that the oligonucleotide is adapted for immobilization and immobilized to the surface via the oligonucleotide portion of the oligonucleotide-protein fusion i.e. the protein is not adapted for direct immobilization to a common surface. Furthermore, Kuimelis et al teach the oligonucleotide and protein are adapted for co-immobilization to the surface prior to contact with (and therefore in the absence of) the common surface.

The courts have stated that claims must be given their broadest reasonable interpretation consistent with the specification *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997); *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969); and *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (see MPEP 2111).

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Regarding Claim 89, Kuimelis et al disclose the method further comprising a signaling entity immobilized relative to the oligonucleotide and protein i.e. a ligand for the protein is detectably labeled and upon binding the protein is immobilized relative to the oligonucleotide-protein fusion (Column 2, lines 45-59 and Column 8, lines 24-67).

Regarding Claim 90, Kuimelis et al disclose the method further comprising exposing the protein to an entity (i.e. label) carrying immobilized thereto a binding partner of the protein (Column 2, lines 45-59 and Column 8, lines 24-67).

Regarding Claim 91, Kuimelis et al disclose the method further comprising exposing the protein to an entity (i.e. label) carrying immobilized thereto a binding partner of the protein wherein the label is "capable of" carrying a plurality of binding partners (Column 2, lines 45-59 and Column 8, lines 24-67). The claim is broadly to an entity "capable of" carrying a plurality of binding partners which encompasses a label which is capable of carrying more than one binding partner. The labels of Kuimelis et al are capable of carrying proteins, drugs, therapeutics, enzymes and nucleic acids (Column 2, lines 60-65). As such, the entity of Kuimelis et al are capable of binding a plurality of binding partners as claimed.

Regarding Claims 93-94, Kuimelis et al disclose the method wherein the surface is a recruitabel particle i.e. magnetic bead (Column 3, lines 58-63).

Regarding Claim 95, Kuimelis et al disclose the method wherein the surface is a colloid particle e.g. agarose or sepharose (Column 3, lines 58-63).

Regarding Claim 96, Kuimelis et al disclose the method wherein the surface is a surface of a chip (Column 3, lines 58-63).

Regarding Claim 98, Kuimelis et al disclose the method wherein the protein is a fusion protein i.e. nucleic acid-protein fusion (Column 1, lines 38-49).



7. Claims 69, 70, 76, 77, 79, 82-85, 88 and 98 are rejected under 35 U.S.C. 102(e) as being anticipated by Szostak et al (U.S. Patent No. 6,207,446, filed 14 January 1998).

Regarding Claim 69, Szostak et al disclose a method comprising expressing a protein with an oligonucleotide and immobilizing the protein and the oligonucleotide relative to each other i.e. the protein-oligonucleotide fusion is immobilized via hybridization of the oligonucleotide to an immobilized a capture probe (Column 12, line 33-Column 14, line 55 and Column 42, line 56-Column 43, line 4).

Regarding Claim 70, Szostak et al disclose the method wherein the oligonucleotide and protein are immobilized relative to a common surface i.e. solid support (Column 42, line 56-Column 43, line 4).

Regarding Claim 76, Szostak et al disclose the method wherein the surface is a surface of a chip i.e. microchip (Claim 1).

Regarding Claim 77, Szostak et al disclose the method wherein the protein and oligonucleotide are immobilized relative to a common polymer e.g. capture probe (Column 12, line 33-Column 14, line 55 and Column 42, line 56-Column 43, line 4).

Regarding Claim 79, Szostak et al disclose the method wherein the oligonucleotide is hybridized to an oligonucleotide sequence fastened to the surface i.e. capture probe (Column 12, line 33-Column 14, line 55 and Column 42, line 56-Column 43, line 4).

Regarding Claim 82, Szostak et al disclose the method wherein the oligonucleotide comprises linear DNA i.e. DNA splint (Column 13, lines 45-55).

Regarding Claim 83, Szostak et al disclose the method wherein the oligonucleotide comprises a protein expression template i.e. the RNA encodes the protein portion of the oligo-protein fusion (Column 12, line 33-Column 14, line 55 and Column 42, line 56-Column 43, line 4).

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Regarding Claim 84, Szostak et al disclose the method wherein the oligonucleotide comprises a product of a polymerase chain reaction (Column 12, lines 47-50).

Regarding Claim 85, Szostak et al disclose the method wherein the oligonucleotide comprises a protein expression template i.e. the RNA encodes the protein portion of the oligo-protein fusion (Column 12, line 33-Column 14, line 55 and Column 42, line 56-Column 43, line 4).

Regarding Claim 88, Szostak et al disclose the method wherein the oligonucleotide and protein are adapted to be immobilized relative to each other in the absence of a common surface to which each is immobilized (Column 12, line 33-Column 14, line 55 and Column 42, line 56-Column 43, line 4).

The claim is given the broadest reasonable interpretation in view of the claim language which broadly defines a method step of immobilization or adaptation of the oligonucleotide and protein. Broadly interpreted, the claim is limited to adapting the oligonucleotide and protein for immobilization in the absence of the surface e.g. prior to contacting the surface. The claim can also be interpreted as a negative limitation wherein the protein and oligonucleotide are not directly immobilized to a common surface. The disclosure of Szostak et al encompasses both these interpretations. Szostak et al teach that the oligonucleotide is adapted for immobilization and immobilized to the surface via the oligonucleotide portion of the oligonucleotide-protein fusion i.e. the protein is not adapted for direct immobilization to a common surface. Furthermore, Szostak et al teach the oligonucleotide and protein are adapted for co-immobilization to the surface prior to contact with (and therefore in the absence of) the common surface.

The courts have stated that claims must be given their broadest reasonable interpretation consistent with the specification *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997); *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969); and *In re Zletz*, 893 F.2d 319, 321-22, 13

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USPQ2d 1320, 1322 (Fed. Cir. 1989) (see MPEP 2111).

Regarding Claim 98, Szostak et al disclose the method wherein the protein is a fusion protein i.e. nucleic acid-protein fusion (Column 1, lines 38-49).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 71-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuimelis et al (U.S. Patent No. 6,537,749 filed 31 March 1999) in view of Bamdad (Biophysical Journal, 1998, 75: 1989-1996).

Regarding Claims 71-72, Kuimelis et al disclose a method comprising expressing a protein with an oligonucleotide and immobilizing the protein and the oligonucleotide relative to each other i.e. the protein-oligonucleotide fusion is immobilized via hybridization of the oligonucleotide to an immobilized a capture probe (Column 3, lines 13-22 and Example 7, especially, Column 13, lines 7-64) wherein the surface is coated for oligonucleotide-protein immobilization (Column 4, line 65-Column 5, line 11) but they do not teach the surface is coated with a self-assembled monolayer (SAM). However, surfaces coated with SAM were well known in the art at the time the claimed invention was made as taught by Bamdad who teach that SAM coated surfaces provide specific capture of tagged proteins. Bamdad further teaches

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that the SAM surface provides information on the valency and interbinding site distance of target molecules which is valuable information for designing high-affinity bivalent drugs (page 1989, second full paragraph). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the SAM coating of Bamdad to the surface of Kuimelis et al to thereby immobilize the oligonucleotide-protein to the SAM coated surface. One of ordinary skill in the art would have been motivated to do so based on the teaching of Bamdad to thereby obtain information on the valency and interbinding site distance of target molecules for the expected benefit of designing high-affinity bivalent drugs (page 1989, second full paragraph).

10. Claims 78 and 86-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuimelis et al (U.S. Patent No. 6,537,749 filed 31 March 1999) in view of Nilsen (U.S. Patent No. 6,110,687, filed 18 June 1999).

Regarding Claims 78 and 86-87, Kuimelis et al disclose a method comprising expressing a protein with an oligonucleotide and immobilizing the protein and the oligonucleotide relative to each other i.e. the protein-oligonucleotide fusion is immobilized via an immobilized a capture probe (Column 3, lines 13-22 and Example 7, especially, Column 13, lines 7-64) but they do not teach the capture probe is a DNA binding protein or the surface is a dendrimer. However, oligonucleotides immobilized via DNA binding protein (antibody) capture to a dendrimer surface was known in the art at the time the claimed invention was made as taught by Nilsen who teaches the immobilization "significantly" enhances detection and facilitates oligonucleotide labeling (Column 4, lines 10-17 and 49-58). It would have been

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obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the capture probe immobilization of Kuimelis et al with the DNA binding protein capture and dendrimer surface of Nilsen for the expected benefit of facilitating labeling and significantly enhancing detection as taught by Nilsen (Column 4, lines 49-58).

11. Claims 80-81, 92 and 97-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuimelis et al (U.S. Patent No. 6,537,749 filed 31 March 1999) in view of Dower et al (U.S. Patent No. 6,309,842, filed 24 November 1997).

Regarding Claims 80-81, Kuimelis et al teach the method comprising expressing a protein with an oligonucleotide and immobilizing the protein and the oligonucleotide relative to each other i.e. the protein-oligonucleotide fusion is immobilized via hybridization of the oligonucleotide to an immobilized a capture probe (Column 3, lines 13-22 and Example 7, especially, Column 13, lines 7-64) wherein the oligonucleotide comprises "without limitation" DNA (Column 3, lines 40-44) but they do not specifically the DNA is plasmid DNA or an expression vector. However, Dower et al teach a similar method comprising an immobilized oligonucleotide and expressed protein wherein the oligonucleotide comprises plasmid DNA or an expression vector whereby the expressed protein is displayed as a coat protein for easy screening (Column 9, lines 15-28). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the DNA portion of the nucleic acid-protein fusion taught by Kuimelis et al with the plasmid DNA or an expression vector taught by

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Dower et al whereby the expressed protein is displayed as a coat protein for the expected benefit of easy screening as taught by Dower et al (Column 9, lines 15-28).

Regarding Claim 92, Kuimelis et al teach the method further comprising exposing the protein to an entity (i.e. label) carrying immobilized thereto a binding partner of the protein wherein the label is "capable of" carrying a plurality of binding partners (Column 2, lines 45-59 and Column 8, lines 24-67) but they do not teach the entity carrying a plurality of binding partners. However, Dower et al teach the similar method further comprising exposing the protein to an entity (i.e. solid support) carrying a plurality of binding partners (Column 7, lines 7-11). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the entity carrying a plurality of binding partners taught by Dower et al to the binding partner analysis of Kuimelis et al to thereby increase the binding analysis of the protein as taught by Dower et al (Column 6, line 63-Column 7, line 11).

Regarding Claim 97, Kuimelis et al teach the method comprising an oligonucleotide identifier (i.e. nucleic acid binding partner for the protein portion of the oligonucleotide-protein fusion, Column 2, lines 60-65) but they do not teach the identifier is immobilized to the binding partner. However, Dower et al teach the similar method wherein an oligonucleotide identifier (i.e. tag DNA) is adapted for immobilization to the binding partner (Column 5, lines 48-62; Column 8, lines 13-25 and Fig. 1) and they teach that DNA tags are a high density storage medium which is easily identified and/or decoded using a variety of techniques (Column 8, lines 13-25). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the DNA tag of Dower et al to the binding-partner screening of Kuimelis et al based on the teaching of Dower et al wherein the DNA tags store a large amount of information and for the added benefit of facilitating binding partner identification as taught by Dower et al (Column 8, lines 13-25).

Regarding Claims 98-101, Kuimelis et al do not teach the protein comprises a binding partner and affinity tag. However, Dower et al teach the similar method wherein the protein

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is a fusion protein comprising a binding partner and affinity tag and further comprising a signaling entity immobilized relative to the protein and oligonucleotide wherein the signaling entity is part of the fusion protein (Column 15, line 63-Column 18, line 13) whereby the fusion protein, affinity tag and signaling entity provide for amplified signals and thereby controlled detection sensitivity (Column 17, lines 60-65). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the fusion protein, affinity tag and signaling entity of Dower et al to the protein of Kuimelis et al to thereby provide for amplified signals and thereby controlled detection sensitivity as taught by Dower et al (Column 17, lines 60-65).

#### **Prior Art**

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Mattheakis et al (U.S. Patent No. 5,922,545) teach expressing proteins with an oligonucleotide.

Pluckthun et al (U.S. Patent No. 6,348,315) teach expressing proteins with an oligonucleotide.

#### **Conclusion**

13. No claim is allowed.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (703) 306-5878. The examiner can normally be reached on 6:30 TO 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (703) 308-1119. The fax phone numbers for the organization where this

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application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-8724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



BJ Forman, Ph.D.  
Patent Examiner  
Art Unit: 1634  
July 16, 2003